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EXAMINER	
AMINI, JAVID A	

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2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/524,698	TONISSON, ALAN	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *129-186* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *16*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 22, 2004 has been entered.

Response to remarks on page 31

Applicant's arguments filed March 22, 2004 have been fully considered but they are not persuasive.

Field of the Politis (the reference) and Applicant inventions:

The Politis's invention relates to the creation of computer generated images both in the form of still pictures and video imagery and, in particular relates to the compositing process of creation of an image made up from multiple sub components.

The Applicant's invention relates to the creation of computer-generated images both in the form of still pictures and video imagery and, in particular, relates to an efficient process and apparatus for creating of an image made up by compositing multiple graphical objects.

Applicant on page 32 line 1 discloses that each active region outline comprises at least a portion of one of the predetermined object outlines or parts thereof. Examiner's reply: Politis in fig. 4 illustrates "A Venn diagram" *are often two circles (can be other shapes) that overlap. The overlapping part usually contains information that is pertinent to the labels on both sides of the Venn diagram (Can be more than 2 circles).* In fig. 4 is illustrated the same as Applicant illustrates in fig. 2. The interpretation: the overlap part is corresponded to active region that

Applicant claims, and it is similar to effective and clipping regions as applicant discloses on page 34 in the last paragraph and on page 35 lines 1-7 of remarks.

Applicant on page 33 last paragraph argues that the bounding box methods in Politis's invention needed more pixel operation to process the active regions, and some pixels are included in the bounding box approximation of an object that are outside the actual outline (or boundaries) of an object. Examiner's reply: Politis in col. 6 lines 40-41 teaches that any pixel outside the boundary of a graphical element is treated as being fully transparent.

Applicant on page 34 lines 15-20 argues that Politis fails to teach the recitations of claim 129, of determining an active region for each of the graphical objects, each of the active regions being defined by at least one active region outline comprising at least a portion of one of the predetermined object outlines or parts thereof. Examiner's reply: The claim languages do not fulfill the method used, since the Applicant and the reference used the Venn diagram method (See the above definition).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 129- rejected under 35 U.S.C. 102(e) as being anticipated by Politis US. Patent 5,745,121.

1. Claim 129.

A method of creating an image, the image to be formed by rendering a plurality of graphical objects to be composited according to one or more compositing operations, each graphical object having a predetermined object outline, each of the compositing operations being at least defined by one or more operands, each operand representing one of the graphical objects or a result of another of the compositing operations, said method comprising the steps of:

Politis in abstract discloses that bounding box methods are used for locating (determining) active areas (region) of graphical elements (objects) from the nodes. The claim languages do not fulfill the method used, since the Applicant and the reference used the Venn diagram method (See the above definition). "Determining an active region for each of the graphical objects, each of the active regions being defined by at least one active region outline comprising at least a portion of one of the predetermined object outlines or parts thereof, such that the active region of a particular operand is wholly within the particular graphical object;"

Politis in figs. 1-3 illustrate two objects 1 and 4 and in fig. 3 area (region) 7 considered (determined) as the active region (intersection) of the two objects, "Determining an active region for each of the compositing operations, said the active region for a particular compositing operation being equal to the intersection of the active regions of each operand of the particular compositing operation;"

Politis in fig. 22 illustrates a graphical element 60 is immediately clipped against the borders of graphical element 61 to produce the final output 64, item 64 is an active region. A person skilled in the art could see the similarity in fig. 22 of the reference and the Applicant claim languages, "Determining a clip region for each of the compositing operations, the clip region for a particular compositing operation being equal to the intersection of the active region of the particular

compositing operation and the clip region of a parent compositing operation the particular compositing operation;"

Politis in fig. 22 illustrates the effective region (item 64), that is equal to the intersection of the clip region (item 61), and item 64 is considered as a active region. The compositing operations apply to items 60 and 61 (see figs. 1-4 for more detail explanations) and final step is the graphical image on item 64. "Determining an effective region for each of the compositing operations the effective region for a particular compositing operation being equal to the intersection of the clip region of the particular compositing operation and the active regions associated with the operands of the particular compositing operation; and applying the compositing operations to said the effective regions to create the image.

2. Claim 130.

A method according to claim 129, wherein each clip region is dependent upon an active region of an operand of a particular compositing operation. Politis in Figs. 30-33 illustrates graphical elements and their corresponding bounding

3. Claim 131.

A method according to claim 129, wherein the image is at least in part a pixel-based image. Politis in col. 5, lines 50-63 discloses Color and text graphical elements can include attributes which include: color, whether a solid color, a blend between two colors, or a repeating pixel-based tile.

4. Claim 132.

A method according to claim 129, wherein a wholly opaque object in a particular region acts to eliminate one or more compositing operations contributing to at least one other object

constituting the particular region, wherein the at least one other object is obscured by the wholly opaque object in a space in which the outlines are defined. Politis illustrates in Fig. 3-4.

5. Claim 133.

See rejection of claim 129 for the repeated part of this claim. A method of creating an image, the image to be formed by rendering a plurality of graphical objects to be composited according to one or more compositing operations, each graphical object having a predetermined object outline, each compositing operation being at least defined by one or more operands, each operand representing one of the graphical objects or a result of another of the compositing operations, said method comprising the steps of: determining an active region corresponding to each of the graphical objects, each of the active region being defined by at least one active region outline comprising a portion of one of the predetermined object outlines or parts thereof, such that the active region of a particular operand is wholly within the particular graphical object; determining an active region for each of the compositing operations, the active region for a particular compositing operation being equal to the intersection of the active regions of each operand of the particular compositing operation; determining a clip region for the compositing operations, the clip region for a particular compositing operation being equal to the intersection of the active region of the particular compositing operation and the clip region of a parent compositing operation the particular compositing operation; determining a plurality of effective regions for each of the compositing operations, the effective region for a particular compositing operation being equal to the intersection of the clip region of the particular compositing operation and active regions of the particular compositing operation;

Examiner interpretation for the term mapping: A function such that for every element of one set (items 60 and 61) there is a unique element of another set (item 63). Politis in tables 1-5 illustrates the claim language of the invention."Mapping the effective regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least one of the operators or represents an outline for clipping at least one other level; and compositing the image using the compositing table. Politis discloses in (col. 1, lines 17-37) that computer generated images are typically made up of many differing components or graphical elements which are "composited" or rendered together to create a final image. Politis discloses in (Figs. 28 and 29) the series of instructions 98 and 87 (expressions representing the effective regions) are representing the effective region.

6. Claim 134.

A method according to claim 133, wherein each of the clip regions is dependent upon an active region of an operand of a particular compositing operation. Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

7. Claim 135.

A method according to claim 133, wherein a level comprising a push operation is added to the compositing table. Politis illustrates in Figs. 28-29 a push operation is added to the table.

8. Claim 136.

A method according to claim 133, wherein a corresponding compositing expression corresponding to an active region is complex. Politis discloses the corresponding compositing expression further region is complex in see (col. 20, lines 4-64).

9. Claim 137.

A method according to claim 133, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24, the clip operation added to table.

10. Claim 138.

A method according to claim 133, wherein an active region is determined on the basis that the corresponding compositing operation has a complex left operand. Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1.

11. Claim 139.

A method according to claim 138, wherein a level comprising a pop operation is added to the compositing table. Politis illustrates in Fig. 23 that pop operation is added to the table.

12. Claim 140.

A method according to claim 139, wherein the pop operation will remove any unused pixel being outside an active region representing the complex left operand, during compositing of the complex left operand. Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

13. Claim 141.

A method according to claim 140, wherein the active region is the active region of the complex left operand. Politis in Fig. 4 illustrates the complex left operand by "in".

14. Claim 142.

A method according to claim 140, wherein the active region is transformed to an effective region by the pop operation. Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

15. Claim 143.

A method according to claim 142, wherein the effective region is the effective region of the complex left operand. Politis in Fig. 4 illustrates the complex left operand by "in".

16. Claim 144.

A method according to claim 143, wherein the effective region corresponds to a complex expression. Politis in Fig. 4 illustrates it.

17. Claim 145.

A method according to claim 144, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

18. Claim 146.

A method according to claim 133, wherein an active region is determined on the basis that the corresponding compositing operation has a primitive left operand. Politis in Fig. 4 illustrates the complex left operand by "in".

19. Claim 147.

A method according to claim 133, wherein a level comprising an operation and a data fill value of a particular object constituting an active region, is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

20. Claim 148.

A method according to claim 145, wherein the active region corresponds to a complex expression. Politis in Fig. 4 illustrates it.

21. Claim 149.

A method according to claim 147, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

22. Claim 150.

A method according to claim 145, wherein a level comprising a push operation is added to the compositing table. Politis illustrates in Figs. 28-29 a push operation is added to the table.

23. Claim 151.

A method according to claim 133, wherein the compositing table is optimised in regard to the number of pixel operations required to render the image. Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

24. Claim 152.

A method according to claim 133, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by the corresponding compositing expression. Politis discloses in Figs. 28-29 a ruling that organized into orders or ranks each subordinate to the one above it.

25. Claim 153. A method according to claim 152, wherein the mapping comprises modifying a manner in which the corresponding compositing expression is evaluated without modifying the hierarchically structured representation. Politis discloses in Figs. 28-29 a ruling that organized into orders or optimize without modifying hierarchically structured representation.

26. Claim 154.

A method according to claim 133, wherein the image is at least in part a pixel-based image. the step is inherent because the display is combination of pixels therefore, the combination of pixel images is the image itself.

27. Claim 155.

A method according to claim 133, wherein a wholly opaque object in a particular region acts to eliminate one or more compositing operations contributing to at least one other object constituting the particular region, wherein the at least one other object is obscured by the wholly opaque object in a space in which the outlines are defined. Politis illustrates in Fig. 3-4.

28. Claim 156.

See rejection of claim 133. A method of creating an image, the image to be formed by rendering a plurality of graphical objects to be composited according to a hierarchically structured compositing expression, each of the graphical objects having a predetermined object outline,

such that an object region formed by a particular object outline of a particular graphical object is wholly within the particular graphical object, the hierarchically structured compositing expression, each compositing operation being defined by at least one compositing operator and one or more operands, each of the operands representing one of the graphical objects or a sub-expression representing the result of another of the compositing operations, said method comprising the steps of: determining an active region for at least each sub-expression of the hierarchically structured compositing expression, each active region comprising at least one active region outline, each of the active region outlines comprising at least a portion of one or more of the predetermined object outlines of at least one graphical object associated with a corresponding sub-expression and being dependent on the operators contained in said each sub-expression, such that the active region of a particular sub-expression is formed wholly by one or more of the object regions of graphical objects associated with A the particular sub-expression; determining a clip region for the sub-expressions, the clip region for a particular sub-expression being equal to the intersection of the active region of the particular sub-expression and the clip region of a parent compositing operation of the particular sub-expression; determining an effective region for each of the compositing operations of the hierarchically structured compositing expression, the effective region for a particular compositing operation being equal to the intersection of the clip region of the particular compositing operation and the active regions of the particular compositing operation; mapping each the effective region and corresponding compositing operation into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least

one of the operators or represents an outline for clipping at least one other level; and evaluating the hierarchically structured compositing expression using the compositing table.

29. Claim 157.

The method according to claim 156, wherein said active regions are determined during an upward traversal of the hierarchically structured compositing expression and the clip regions are determined in a downward traversal of the hierarchically structured compositing expression.

Politis in figs. 17 and 18 illustrates the limitation of the claim languages.

30. Claim 158.

See rejection of claim 133, A method of creating an image, the image to be formed by compositing at least a plurality of graphical objects according to one or more compositing operations, each graphical object having a predetermined object outline, each compositing operation being defined by at least one compositing operator and one or more operands, each of the operands representing one of the graphical objects or a result of another of the compositing operations, said method comprising the steps of: determining an active region for each of the graphical objects, each active region being defined by at least one active region outline, each active region outline comprising at least a portion of one of the predetermined object outlines or parts thereof, such that the active region of a particular operand is wholly within the particular graphical object; determining an active region for each of the compositing operations, the active region for a particular compositing operation being equal to the intersection of the active regions associated with each operand of the particular compositing operation; determining an effective region for each of the compositing operations wherein the effective region for a particular compositing operation being equal to the intersection of a clip region of the particular

compositing expression and one or more of the active regions of the operands of the particular compositing operation, the clip region for a particular compositing operation being equal to the intersection of the active regions of the particular composting operation and the clip region of a parent compositing operation; mapping the effective regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least one of the operators or an outline for clipping at least one other level; and compositing the image using the compositing table.

31. Claim 159.

A method according to claim 158, wherein each of the clip regions is dependent upon an active region of an operand of a particular compositing operation. Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

32. Claim 160.

A method according to claim 158, wherein a level comprising a push operation is added to the compositing table. Politis illustrates in Figs. 28-29 a push operation is added to the table.

33. Claim 161.

A method according to claim 158, wherein a corresponding compositing expression corresponding to an active region is complex. Politis discloses the corresponding compositing expression further region is complex in (col. 20, lines 4-64).

34. Claim 162.

A method according to claim 158, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

35. Claim 163.

A method according to claim 158, wherein an active region is determined on the basis that the corresponding compositing operation has a complex left operand. Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1. And also see Figs. 3-4.

36. Claim 164.

A method according to claim 163, wherein a level comprising a pop operation is added to the compositing table. Politis illustrates in Fig. 23 that pop operation is added to the table.

37. Claim 165.

A method according to claim 164, wherein the pop operation will remove any unused pixel being outside an active region representing the complex left operand, during compositing of the complex left operand. Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

38. Claim 166.

A method according to claim 165, wherein the active region is the active region of the complex left operand. Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction. And also see Figs. 3-4.

39. Claim 167.

A method according to claim 165, wherein the active region is transformed to a still further region by the pop operation. Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

40. Claim 168.

A method according to claim 167, wherein the effective region is the effective region of the complex left operand. Politis in Figs. 3-4 illustrates it.

41. Claim 169.

A method according to claim 168, wherein the effective region corresponds to a complex expression. Politis in Figs. 3-4 illustrates it.

42. Claim 170.

A method according to claim 169, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

43. Claim 171.

A method according to claim 158, wherein a further active region is determined on the basis that the corresponding compositing operation has a primitive left operand. Politis discloses in (col. 8 lines 34-42) that an "infix" or "expression based" approach where primitive graphical elements may be either operated on directly or stored in variables.

44. Claim 172.

A method according to claim 158, wherein a level comprising an operation and a data fill value of a particular object constituting an active region, is added to the compositing table. Politis illustrates in Figs. 28-29 a push operation is added to the table.

45. Claim 173.

A method according to claim 171, wherein the region corresponds to a complex expression. Politis in Figs. 3-4 illustrates it

46. Claim 174.

A method according to claim 173, wherein a level comprising a clip operation is added to the compositing table. Politis discloses in Fig. 24 the clip operation added to table.

47. Claim 175.

A method according to claim 171, wherein a level comprising a push operation is added to the compositing table. Politis illustrates in Figs. 28-29 a push operation is added to the table.

48. Claim 176.

A method according to claim 158, wherein the compositing table is optimized in regard to the number of pixel operations required to render the image. Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

49. Claim 177.

A method according to claim 158, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by the corresponding compositing expression. Politis discloses in Figs. 28-29 a ruling that organized into orders or ranks each subordinate to the one above it.

50. Claim 178.

A method according to claim 177, wherein the mapping comprises modifying a manner in which the corresponding compositing expression is evaluated without modifying the hierarchically structured representation. Politis discloses in Figs. 28-29 a ruling that organized into orders or optimize without modifying hierarchically structured representation.

51. Claim 179.

A method according to claim 158, wherein the image is at least in part a pixel-based image. the step is inherent because the display is combination of pixels therefore, the combination of pixel images is the image itself.

52. Claim 180.

A method according to claim 158, wherein a wholly opaque object in a particular region acts to eliminate one or more compositing operations contributing to at least one other object constituting the particular region, wherein the at least one other object is obscured by the wholly opaque object in a space in which the outlines are defined. Politis illustrates in Fig. 3-4.

53. Claim 181.

See rejection of claim 129, A method of creating an image, the image to be formed by rendering a plurality of graphical objects to be composited according to a hierarchical structure representing a compositing expression for the image, the hierarchical structure including a plurality of nodes, each node being associated with either a compositing operator or an operand of the compositing expression, each operand representing one of the graphical objects or a result of a sub-expression of the compositing expression, each of the graphical objects having a predetermined object outline, said method comprising the steps of: determining an active region

for at least each sub-expression of the compositing expression, each of the active regions being defined by at least one active region outline, each of the active region outlines comprising at least a portion of one of the predetermined object outlines or parts thereof, such that the active region of a particular sub-expression is wholly within a graphical object being represented by the particular sub-expression; determining an active region for at least each sub-expression of the compositing expression, the active region for a particular sub-expression being equal to the intersection of all active regions associated with further sub-expressions containing the particular sub-expression; determining a clip region for the sub-expressions, the clip region for a particular sub-expression being equal to the intersection of the active region of the particular sub-expression and the clip region of a parent compositing operation of the particular sub-expression; determining an effective region for each of the nodes, each of the effective regions having a corresponding compositing operation, the effective region for a particular node being equal to the intersection of the clip regions and the active regions associated with the particular node; and applying the corresponding compositing operations substantially to the effective regions to create the image.

54. Claim 182.

The method according to claim 181, said method further including the steps of: mapping the effective regions and the compositing operations into a compositing table comprising a plurality of levels, wherein each the level represents at least one compositing operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and compositing the image using the compositing table. Politis illustrates in Fig. 23, that a first

method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the

55. Claim 183.

The method according to claim 181, wherein the compositing operations include compositing and stack operations. Politis discloses in (col. 9, lines 18-21) for each scan line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

56. Claim 184.

See rejection of claim 129, A computer readable medium storing a program for apparatus which processes graphical objects intended to form a raster pixel image, the processing comprising a method of creating an image, the image to be formed by rendering at least a plurality of graphical objects to be composited according to a hierarchical structure representing a compositing expression for the image, the hierarchical structure including a plurality of nodes, each node being associated with either a compositing operator or an operand of the compositing expression, each of the operands representing one of the graphical objects or a result of a sub-expression of the compositing expression, each of the graphical objects having a predetermined object outline, said program comprising: code for determining an active region for at least each sub-expression of the compositing expression, each of the active regions being defined by at least one active region outline, each of the active region outlines comprising at least a portion of one of the predetermined object outlines or parts thereof, such that the active region of a particular sub-expression is wholly within a graphical object being represented by the particular sub-expression; code for determining a further active region for each sub-expression of the

compositing expression, the active region for a particular sub-expression being equal to the intersection of all active regions associated with further sub-expressions containing the particular sub-expression; code for determining a clip region for each of the subexpressions, the clip yi region for a particular sub-expression being equal to the intersection of the active region of the particular sub-expression and the clip region of a parent compositing operation of the particular sub-expression; code for determining an effective region for each of the nodes, each of the effective regions having a corresponding compositing operation, the effective region for a particular node being equal to the intersection of the clip regions and the active regions associated with the particular node; and code for applying the corresponding compositing operations substantially to the effective regions to create the image.

57. Claim 185.

The computer readable medium according to claim 184, said medium further storing: code for mapping the effective regions and the compositing operations into a compositing table comprising a plurality of levels, wherein each the level represents at least one compositing operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and Y code for compositing the image using the compositing table. Politis illustrates in Fig. 23, that a first method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the table

58. Claim 186.

The computer readable medium according to claim 184, wherein the compositing operations include compositing and stack operations. Politis discloses in (col. 9, lines 18-21) for each scan

line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

JEFFERY BRIER
PRIMARY EXAMINER